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Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Recio, C.A., Zambrano, N., Pena, L., Reig, J.A., Rhoads, A., Rouzand Notario, V.
The human PCPH proto-oncogene: cDNA identification, primary
The human PCPH proto-oncogene: and expression in normal and
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Recio, J.A., Zambrano, N. and Notario, V.
Direct Submission
Submitted (22-MAR-1999) Radiation Medicine, Georgetown Univ.
Medical Center, 3970 Reservoir Road, NW, Washington, DC 200
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Ford, J., Mulero, J.J. and Yeung, G.

Methods and materials relating to CD39-like po
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S Ford, J., Mulero, J.J. and Yeung, G.

Methods and materials relating to CD39-like po

Methods and materials relating to CD39-like po

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Strausberg, R.

Direct Submission

L Submitted (03-JAN-2002) National Institutes of Health, Mammalian Gene Collection (MGC), Cancer Genomics Office, National Cancer Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590, USA

K NIH-MGC Project URL: http://mgc.nci.nih.gov
Contact: MGC help desk
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: ATCC
cDNA Library Preparation: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLN)
DNA Sequencing Dy: Sequencing Group at the Stanford Human Genome Center, Stahford University School of Medicine, Stanford, CA 94305
Web site: http://www-shgc.stanford.edu
Contact: (Dickson, Mark) mcd@paxil.stanford.edu
Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers,
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N Homo sapiens, Similar to ectonucleoside triphosphate diphosphohydrolase 5, clone MGC:9127 IMAGE:3847878, mRN; cds.

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BC020966.1 GI:18089246

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Homo sapiens (human)

Homo sapiens

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/product="Similar to ectonucleoside triphosphate
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The present sequence is a cDNA encoding the CD39-L4 protein, an apyrase and/or nucleotide diphosphatase (NDPase). It is isolated from the human content liver-spleen cDNA library, b2HFLS20W. It is a soluble hTP cotal liver-spleen cDNA library, b2HFLS20W. It is a soluble hTP cadenosine diphosphotydrolases (ATDDase) and is involved in the hydrolysis of adenosine diphosphate (ADP), the agonist that causes platelet aggregation. CD39-L4 protein has 30% and 80% homology to human and contine cD39-L4 is used to treat or prevent thrombosis, myocardial cactivity. CD39-L4 is used to treat or prevent thrombosis, myocardial cactivity. CD39-L4 is used to treat or prevent thrombosis, myocardial cannot not a molecular weight markers and as nutritional supplements. It is used to identify therapeutic agents that bind and modulate CD39-L4. It is coupled to toxins for targeting drugs to tumours or other cells that express CD39-L4.
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cor; tor Human CD39-like protein; apyrase; NDPase; platelet function inhibit myocardial infarction; cerebral ischaemia; angina; arterial thrombocerebral artery thrombosis; platelet aggregation; inflammation; apoptosis; autoimmune disorder; neurological disorder; Alzheimer's disease; Parkinson's disease; cancer; CD39-L4; ss.

CD39-L4

CD39 like protein

encoding

CDNA

Human

Homo sapiens

WO200110265-A1

15-FEB-2001

2000WO-US21790 -AUG-2000; 99US-0370265. 2000US-0481238. 2000US-0557800. 2000US-0583231. 2000US-0608285. 09-AUG-1999; 11-JAN-2000; 25-APR-2000; 26-MAY-2000; 30-JJN-2000;

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2001-147489/15 03; AAB72238. -PSDB;

apyras myccardia with Polynucleotides encoding human CD39-like polypeptides, with and/or NDPase activity, which are useful in the treatment pathological conditions caused by thrombosis (e.g. myccard infarction) and inflammatory disorders -

203pp; English 1; F1.9 10; This invention relates to polynucleotides encoding human CD39-like polypeptides with apyrase and/or NDPase activity. The polypeptides having ATPDase, including NDPase, activity are useful for inhibiting platelet function and can therefore be used in the prophylaxis or treatment of pathological conditions caused by or involving thrombosis or excessive coagulation or excessive platelet aggregation, such as myocardial infarction, cerebral ischaemia, angina, arterial thrombosis, cerebral artery thrombosis or intracardiac thrombosis, and conditions associated

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with venous thrombosis. CD39-L4 and CD39-L2 polypeptides are useful in modulating disease states (including platelet aggregation, inflammation and apoptosis) associated with ADP or other purinergic signalling by reducing the levels of NDPs. The polypeptides are also useful for prophylaxis or treatment of inflammation related disorders, such as cisorders involving sepsis or systemic inflammatory response syndrome or SIRS (and associated conditions such as fever, tachycardia, tachypnea, cytokine overstimulation); autoimmune disorders such as thrombosis, atherosclerosis, acute pancreatitis, dermatitis, including psoriasis, atherosclerosis, reperfusion injury, asthma, multiple sclerosis, arthritis; neurological disorders including neurodegenerative diseases, epilepsy, depression, Alzheimer's disease, Parkinson's disease, Huntington's disease, and amyotrophic lateral sclerosis; and cancer. The present scuence represents cDNA encoding CD39 like protein CD39-L4.
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Note: The present sequence is not shown in the specification, but is referred to via its GenBank accession number.
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	RESULT 4 AAD31695 ID AAD31695 standard; cDNA; 1998 BP. XX AC AAD31695; XX DT 18-JUN-2002 (first entry) XX	Human; CD-39-like protein; CD3914 protein; ther autoimmune disorder; multiple sclerosis; system rheumatoid arthritis; autoimmune thyroiditis; insulin dependent diabetes mellitus; periodonts osteoarthritis; wound healing; tissue repair; Anglians	ervous system disease; amyoriophic facelar sciencers, name ervous system disease; nerve injury; ischaemia-reperfus ndotoxin lethality; arthritis; nephritis; inflammatory lrchn's disease; virucide; antibacterial; antifungal; new ermatological; immunosuppressive; vulnerary; nootropic; ntiinflammatory; nephrotropic; gastrointestinal; vasotrom hromosome 14q24; gene; ss.	XX XX FH Key FT CDS /*tag= a FT XX /*tag= a /product= "Human CD39L4 protein" PN US6350447-B1.	XX PD 26-FEB-2002. XX 29-JAN-1999; 99US-0240639. XX PR 29-JAN-1999; 99US-0240639. XX XX PR 29-JAN-1999; 99US-0240639. XX XX	Chadwick BP, WPI; 2002-2152 P-PSDB; AAE198	XX PT An isolated polypeptide with phosphohydrolase activity, designat PT CD39L2, useful to identify other proteins with which binding occ PT identify inhibitors and for treatment of, e.g., Alzheimer's, mul PT sclerosis and osteoporosis XX PS Example; Fig 7; 101pp; English.	CC The present invention relates to novel proteins with phosphohydrolic CC activity, designated CD-39-like (CD39L) proteins and polynucleotide CC activity, designated CD-39-like (CD39L) proteins are useful to treat infection CC diseases caused by viral, bacterial, fungal or other infection that CC be treatable with CD39L. They are useful in the treatment of various
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sin; therapy; immune deficiency; s; systemic lupus erythematosus; iditis; allergic reaction; asthma; eriodontal disease; osteoporosis; repair; Alzheimer's disease; ulcer; al sclerosis; Huntington's disease; ischaemia-reperfusion injury; is; inflammatory bowel disease; is; inflammatory bowel disease; herary; nootropic; anticonvulsant; intestinal; vasotropic; 1619 1619 roteins with phosphohydrolase proteins and polynucleotides re useful to treat infectious gal or other infection that may in the treatment of various olase activity, designated s with which binding occurs or , e.g., Alzheimer's, multiple protein" 48 **4**3

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immune deficiencies and disorders, autoimmune disorders such as multiple sclerosis, systemic lupus erythematosus, rheumatoid arthittis, autoimmune thyroiditis and insulin dependent diabetes mellitus, allergic reactions disease, osteoporosis, osteoarthritis and other teophrepair processes.

They may have utility in compositions used for bone, cartilage, tendon, ligament and/or nerve tissue growth or regeneration as well as for wound the incisions and ulcers. CD39L proteins may also be useful for proliferation of neural cells and for regeneration of nerve and brain tissue, i.e. for the treatment of central nervous system diseases such as Alzheimer's of neural cells and for regeneration of nerve and brain tissue, i.e. for the treatment of central nervous system diseases such as Alzheimer's disease, parkinson's disease, amyotrophic lateral sciencesis, Huntington's disease, parkinson's disease, amyotrophic lateral sciencesis, Huntington's disease, peripheral nervous system diseases peripheral nervous system of seases peripheral nervous for neural calised neuropathy and localised neuropathies. They are also used to treat mechanical and traumatic disorders which involve degeneration, cannettion are also useful to promote better or faster closure of nonhealing wounds, including pressure ulcers associated with vascular insufficiency and surgical and traumatic wounds. They also conditions including chronic or acute conditions), including sichaemiar reperfusion injury, endotoxin lethality, arthritis, nephiticis, cytoxine or chemokine-induced lung injury, inflammatory bowel disease or Crohn's disease. The present sequence is human CD39L4 OB9L4 gene is chromosome 14q24 localised on

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence is a cDNA encoding the CD39-L66 protein, a splice variant of CD39-L4 protein. It is an apyrase and/or nuclectide diphosphatase (NDPase), isolated from the human foetal liver-spleen cDNA library, b2HFLS20W. It is a soluble ATP Diphosphchydrolases (ATPDase) and library, b2HFLS20W. It is a soluble ATP Diphosphchydrolases (ATPDase) and is involved in the hydrolysis of adenosine diphosphate (ADP), the agonist that causes platelet aggregation. CD39-L4 protein has 30% and 80% homology to human and murine CD39. It has platelet aggregation inhibition and antithrombotic activity. CD39-L4 is used to treat or prevent thrombosis, myocardial infarction, cerebral ischaemia and angina. It is also used in vitro, to maintain vascular grafts or during extracorporeal circulation, to hydrolyse NDP, as molecular weight markers and as nutritional supplements. It is used to identify therapeutic agents that bind and modulate CD39-L4. It is coupled to toxins for targeting drugs to tumours or other cells that express CD39-L4.
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tor; Human CD39-like protein; apyrase; NDPase; platelet function inhibi myocardial infarction; cerebral ischaemia; angina; arterial thrombocardial artery thrombosis; platelet aggregation; inflammation; apoptosis; autoimmune disorder; neurological disorder; Alzheimer's disease; Parkinson's disease; cancer; CD39-L4; ss.

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WO200110205-A1

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99US-0370265. 2000US-0481238. 2000US-0557800. 2000US-0583231. 2000US-0608285. 09-AUG-1999; 11-JAN-2000; 25-APR-2000; 26-MAY-2000; 30-JUN-2000;

INC HYSEQ (HXSE-)

Q Yeung Mulero JJ, Ford J,

PI; 2001-147489/15 -PSDB; AAB72239. WPI:

apyras Polynucleotides encoding human CD39-like polypeptides, with a and/or NDPase activity, which are useful in the treatment of pathological conditions caused by thrombosis (e.g. myocardial infarction) and inflammatory disorders -

English Claim 10; Page 156-157; 203pp; This invention relates to polynucleotides encoding human CD39-like polypeptides with apyrase and/or NDPase activity. The polypeptides having ATPDase, including NDPase, activity are useful for inhibiting platelet function and can therefore be used in the prophylaxis or treatment of pathological conditions caused by or involving thrombosis or excessive

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ccagulation or excessive platelet aggregation, such as myccardial infarction, cerebral ischaemia, angina, arterial thrombosis, cerebral artery thrombosis or intracardiac thrombosis, and conditions associated with venous thrombosis. CD39-L4 and CD39-L2 polypeptides are useful in modulating disease states (including platelet aggregation, inflammation and apoptosis) associated with ADP or other purinergic signalling by reducing the levels of NDPs. The polypeptides are also useful for prophylaxis or treatment of inflammation related disorders, such as disorders involving sepsis or systemic inflammatory response syndrome or systokine overstimulation); autoimmune disorders such as thrombosis, atherosclerosis, acute pancreatitis, dermatitis, including psoriasis, atherosclerosis, reperfusion injury, asthma, multiple sclerosis, arthritis; neurological disorders including neurodegenerative diseases, epilepsy, depression, Alzheimer's disease, Parkinson's disease, Huntington's disease, and amyotrophic lateral sclerosis; and cancer. The present sequence represents cDNA encoding CD39 like protein CD39-L4.
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This invention relates to polymucleotides encoding human CD39-like polypeptides with apyrase and/or NDPase activity. The polypeptides having ATPDase, including NDPase, activity are useful for inhibiting platelet function and can therefore be used in the prophylaxis or treatment of pathological conditions caused by or involving thrombosis or excessive coagulation or excessive platelet aggregation, such as myocardial infarction, cerebral ischaemia, angina, arterial thrombosis, cerebral artery thrombosis or intracardiac thrombosis, and conditions associated with venous thrombosis. CD39-L4 and CD39-L2 polypeptides are useful in modulating disease states (including platelet aggregation, inflammation or modulating disease states (including platelet aggregation, inflammation and apoptosis) associated with ADP or other purinergic signalling by reducing the levels of inflammation related disorders, such as prophylaxis or treatment of inflammation related disorders, such as circatment of inflammation related disorders, tachycardia, tachypnea, cytokine overstimulation); autoimmune disorders such as thrombosis, atheroscierosis, acute pancreatitis, including psoriasis, cirrhosis, reperfusion injury, asthma, multiple sclerosis, arthritis; neurological disorders including neurodegenerative disease, epilepsy, depression, Alzheimer's disease, Parkinson's disease, Huntington's disease, and amyotrophic lateral sclerosis; and cancer. The present sequence represents the CD39 like protein CD39-L4 coding sequence.
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apyrase

Polynucleotides encoding human CD39-like polypeptides, with a and/or NDPase activity, which are useful in the treatment of pathological conditions caused by thrombosis (e.g. myocardial

99US-0370265. 2000US-0481238. 2000US-0557800. 2000US-0583231. 2000US-0608285.

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WPI; 2001-147489/15 P-PSDB; AAB72243.

2000WO-US21790

09-AUG-2000;

Disclosure; Page 140-142; 203pp; English

infarction) and inflammatory disorders

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Human CD39-like protein; apyrase; NDPase; platelet function myocardial infarction; cerebral ischaemia; angina; arterial cerebral artery thrombosis; platelet aggregation; inflammati apoptosis; autoimmune disorder; neurological disorder; Alzheimer's disease; Farkinson's disease; cancer; CD39-L4; d

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The present sequence is a cDNA encoding the CD39-L4 variant, designated as ACR III mutant protein, an apyrase and/cr nucleotide diphosphatase (NDPase). It is isolated from the human foetal liver-spleen cDNA library, b2HFLS20W. It is a soluble ATP Diphosphohydrolases (ATPDase) and is involved in the hydrolysis of adenosine diphosphate (ADP), the agonist that causes platelet aggregation. CD39-L4 protein has 30% and 80% homology to human and murine CD39. It has platelet aggregation inhibition and antithrombotic activity. CD39-L4 is used to treat or prevent thrombosis, myocardial infarction, cerebral ischaemia and angina. It is also used in vitro, to maintain vascular grafts or during extracorporeal circulation, to hydrolyse NDP, as molecular weight markers and as nutritional supplements. It is used to identify therapeutic agents that bind and modulate CD39-L4. It is coupled to toxins for targeting drugs to tumours or other cells that express CD39-L4.
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                                                                    CD39-L4; human; apyrase; nucleotide diphosphatase; NDPase; variant; ATP Diphosphohydrolase; ATPDase; adenosine diphosphate; ADP; treatment; platelet aggregation; antithrombotic; thrombosis; myocardial infarction cerebral ischaemia; angina; vascular graft; extracorporeal circulation; molecular weight marker; nutritional supplement; tumour; prevention;
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This invention relates to polynucleotides encoding human CD39-like
polypeptides with apyrase and/or NDPase activity. The polypeptides having
the polypeptides with apyrase and/or NDPase activity. The polypeptides having
the polypeptides with apyrase and/or NDPase activity. The polypeptides having
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11-JAN-2000; 2000US-0481238.
25-APR-2000; 2000US-0557800.
26-MAY-2000; 2000US-0583231.
30-JUN-2000; 2000US-0608285.
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called human colon cancer antigens, given in AAB53234 to AAB54006. The human colon cancer antigens can have cytostatic, cardioactive, muscular; neuroprotective, immunomodulatory, gynaecological, gastrointestinal, can neuroprotective, antiinfective and antibacterial activities, and can be used in gene therapy. The colon cancer antigen polynucleotides, con proteins and antibodies to the proteins are useful for the prevention, treatment and diagnosis of colon disorders, such as colon cancer. The polynucleotides may be used in diagnostics and research, such as for chromosome identification, and as hybridisation probes. The proteins may also be used to prevent diseases such as neural disorders, immune system disorders, muscular disorders, reproductive disorders, immune gastrointestinal disorders, wounds, renal disorders, infectious diseases, and cardiovascular disorders. AAC98764 to AAC98772 and AABS4007 represent sequences used in the exemplification of the present
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An isolated polypeptide with phosphohydrolase activity, designated CD39L2, useful to identify other proteins with which binding occur
                                                                                                                                                                                                                                                    "Mouse CD39L4 protein"
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The present invention relates to novel proteins with phosphohydrolase activity, designated CD-39-like (CD39L) proteins and polynucleotides encoding such proteins. CD39L proteins are useful to treat infection that may be treatable with CD39L proteins are useful in the treatment of various incertains caused by viral, bacterial, fungal or other infection that may be treatable with CD39L. They are useful in the treatment of various immune deficiencies and disorders, autoimmune disorders such as multiple sclerosis, systemic lupus erythematosus, rheumatoid arthitis, autoimment of conditions such as asthma and other respiratory problems, periodomal disease, osteoporosis, osteoathritis and other respiratory problems, periodomal disease, parkinson's disease, periodomal disease such as Alzheimer's consistent and locar segmentation of nerve and brain tissue, i.e. for the treatment of central nervous system diseases such as Alzheimer's disease, peripheral nervous system diseases peripheral nervopathy and localised meusopathies. They are also used to treat mechanical and traumatic disorders which involve degeneration, trauma to neural cells or nerve tissue. CD39L proteins of the invention are also useful to promote better or faster closure of non-healing wounds, including pressure ulcers, unlers associated with vacular insulficiency and surgicial and traumatic wounds. They also exhibit anti-inflammatory activity and may be used to treat inflammatory effectors, alterance of the present sequence is a DNA encoding mouse CD39L4 protein.

C schemokine-induced lung injury, inflammatory bowel disease or Cron's also known as nucleotide-triphosphatase (Wipper) conditions and conditions and conditions and conditions and

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ସପ	476	rggatcagcccaaacagggtgctgagactgtccaggagctcttgaaggtggcc
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o'y	1000	GACTGATGGGCACA
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Š.	1060	ATGGTTGGAAGCAGAGTGGATCTTTGGGGGTGTGAATACCAGTATGGTG
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Ç	1120	AAGGGGAGGTGGGCTTTGAGCCCTGCTATGCCGAAGTGCTGAGGGT
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Qy	1180	ATGCTTTCTCTTACT 123
qq	1136	<u> Actricaccado da Agarca da Garda da Contrata Contratoria.</u>
δλ	1240	AGCTGTTGACACAGACATGATTGATTATGAAAAGGGGGG
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D'D	1256	rtricaaagaaagccagagagrerergagagtregggggggrerer
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ćo	1420	G-ACAGCACAGTCTTACAGCTCACAAAGAAAGTGAACAACAT
Dp	1376	CITIGCCGAACGCCACCTCTIACAGCICACAAGAAAGIGAACAACAIAGAGACI
٥٧	1479	GCCACCTTTCACCTGTTGCAGTCTCTGGGCATCTCCCA
Dʻb	1436	igggggccacciticacciccagiciciggcatcaccagcigagcc
·	1539	AGACCTGCATTTGCCAACACCTTTTTAAGGGGAGGAGAGCACTTAG 159
aga	1496	CTCTGAAGCCTGCATTTCTGAACCAGTTTTCTCACAGGAAGGCGTGGACTCA

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25-MAY-2000;
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                                                                                                                                                                                                                                                    The invention relates to human breast cancer expressed polynucleotides afflicted with breast cancer by examining the correlation between the expression of certain markers and the cancerous state of breast cells. The polynucleotides and encoded polypeptides are potential markers for detecting, diagnosing, monitoring, characterising treating and potentially preventing breast cancer. The polynucleotides and encoded polypeptides are also useful for isolating compounds with cytostatic activity.
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Best Local Similarity 90.3%;
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selecting a composition for inhibiting prostate cancer in a patient
assessing the prostate cell carcinogenic potential of a compound;
determining whether prostate cancer has metastasized in a patient;
assessing the aggressiveness or indolence of prostate cancer in a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             a therapy for inhibiting prostate cancer
                                       The invention relates to an isolated nucleic acid molecule (I) cora nucleotide sequence given in Tables 1-9 (ABV)0010-ABV62213) of tspecification or its complement. (I) is useful for:
(a) assessing whether a patient is afflicted with prostate cancer;
(b) monitoring the progression of prostate cancer in a patient;
(c) assessing the efficacy of a test compound to inhibit prostate cancer in a patient;
(d) assessing the efficacy of a therapy for inhibiting prostate cancer in a sessing the efficacy of a therapy for inhibiting prostate cancer in a sessing the efficacy of a therapy for inhibiting prostate cancer in a sessing the efficacy of a therapy for inhibiting prostate cancer in a patient;
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Novel isolated nucleic acid molecule associated with cancerous state of prostate cells and correlating with presence of prostate cancer, useful for detecting presence of prostate cancer, stage of prostate cancer -
                                                                                                                                                                                                                                                                                                                     (e) selecting a composition for inhibiting prostate cancer in a patient (f) assessing the prostate cell carcinogenic potential of a compound; (g) determining whether prostate cancer has metastasized in a patient; (h) assessing the aggressiveness or indolence of prostate cancer in a
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                                                                 The invention relates to an isolated nucleic acid molecule (I) compa nucleotide sequence given in Tables 1-9 (ABV6010-ABV62213) of the specification or its complement. (I) is useful for:
(a) assessing whether a patient is afflicted with prostate cancer;
(b) monitoring the progression of prostate cancer in a patient;
(c) assessing the efficacy of a test compound to inhibit prostate cancer in a patient;
(d) assessing the efficacy of a therapy for inhibit prostate in a patient;
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(a) assessing whether a patient is afflicted with prostate cancer;
(b) monitoring the progression of prostate cancer in a patient;
(c) assessing the efficacy of a test compound to inhibit prostate cancer in a patient;
(d) assessing the efficacy of a therapy for inhibiting prostate cancer in a patient;
(a) assessing the efficacy of a therapy for inhibiting prostate cancer in a patient;
(e) selecting a composition for inhibiting prostate cancer in a patient;
(f) assessing the prostate cell carcinogenic potential of a compout (g) determining whether prostate cancer has metastasized in a patient of a special cancer has metastasized in a patient of a compount cancer has metastasized in a patient of a compount cancer has metastasized in a patient cancer in a patient cancer has metastasized in a patient cancer in a patient cancer has metastasized in a patient cancer in a pa
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Lobases 1 to 1998)
Chadwick, B.P., Williamson, J., Sheer, D. and Frischauf, A.-W.

CDNA cloning and chromosomal mapping of a mouse gene with homolog
to NTPases

Mamm. Genome (1997) In press

Chadwick, B.P. and Frischauf, A.M.

The CD39-like gene family: identification of three new human members (CD39L2, CD39L3, and CD39L4), their murine homologues, and a member of the gene family from Drosophila melanogaster

CGenomics 50 (3), 357-367 (1998)

Mases 1 to 1998)
Chadwick, B.P. and Frischauf, A.-M.

Chadwick, B.P. and Frischauf, A.-M.

Direct Submission
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/mol_type="mRNA"
/db_xref="taxon:9606"
/chromosome="14"
/map="14q24"
/cell_type="keratinocyte"
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Salent No. 6335013
GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Mulero, Julio
APPLICANT: Weung, George
TITLE OF INVENTION: METHODS AND MATERIALS RITILE OF INVENTION: POLYPEPTIDES
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TITLE OF INVENTION: METHODS AND MATERIALS
FILE REFERENCE: 28110/36570
CURRENT APPLICATION NUMBER: 09/481,238
PRIOR APPLICATION NUMBER: 09/481,238
PRIOR APPLICATION NUMBER: 09/481,238
PRIOR APPLICATION NUMBER: 09/370,265
PRIOR APPLICATION NUMBER: 09/350,836
PRIOR FILING DATE: 1999-07-06
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; Patent No. 644771
; GENERAL INFORMATION:
; APPLICANT: Ford, John
; APPLICANT: Mulero, Julio
; TITLE OF INVENTION: METHODS AND MAT;
; TITLE OF INVENTION: POLYPEPTIDES
; FILE REFERENCE: 28111/35908
; CURRENT APPLICATION NUMBER: US/09/3
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Best Local Similarity 100.0%
Matches 1799; Conservative
    ORGANISM: Homo sapiens
FEATURE:
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LOCATION: (1718)
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CURRENT FILING DATE: 1999-08-09
EARLIER APPLICATION NUMBER: PCT/US99/16180
EARLIER FILING DATE: 1999-07-16
EARLIER APPLICATION NUMBER: 09/35C,836
EARLIER FILING DATE: 1999-07-09
EARLIER FILING DATE: 1999-03-19
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EARLIER FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 37
SOFTWARE: Patentin Ver: 2.0
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APPLICANT: Ford, John
APPLICANT: Ford, John
APPLICANT: Ford, John
APPLICANT: Fund, George
TITLE OF INVENTION: Methods and Materials Relating to
TITLE OF INVENTION: Folypeptides
FILE REFERENCE: 28110/36457
CURRENT APPLICATION NUMBER: US/09/557,600C
CURRENT FILING DATE: 2000-01-11
PRIOR APPLICATION NUMBER: 09/481,238
FRIOR FILING DATE: 2000-01-11
PRIOR FILING DATE: 1999-03-16
PRIOR FILING DATE: 1999-03-16
PRIOR FILING DATE: 1999-03-19
PRIOR FILING DATE: 1999-03-16
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NUMBER OF SEQ ID NOS: 56
SOFTWARE: Patentin Ver. 2.0
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LENGTH: 1799
TYPE: DNA
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		1681 AATTTACTTGCMTGGCCGCGTTTACACGTCGTGATGGNAAACCTGCGTCCCAACTAACGC 174 [icati 47 10N: wick, chauf ION: ION:	REFERENCE: 9598-0 SNT APPLICATION NU SNT FILING DATE: 1 SR OF SEQ ID NOS: NARE: Patentin Ver NO 5 STH: 1998	M: Homo sapiens : Y: CDS N: (247)(1530) 39-5 ch	Local Similarity 98.2%; Pred. No. 6; Local Similarity 98.2%; Pred. No	84 TCATACAGACAAGATCATTATGGTGCTGTT	GGTGTGCGAGCAGGATTGCTTCTGCAAAAAGCCTCCACCCAGCCACATCTT

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S-equence 24, Application US/09608285A
Patent No. 6335013
GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Ford, John
APPLICANT: Yeung, George
TITLE OF INVENTION: POLYPEPTIDES
FILE REFERENCE: 28116/36570
CURRENT FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: US/09/608,285A
CURRENT FILING DATE: 2000-06-30
PRIOR FILING DATE: 2000-06-25
PRIOR FILING DATE: 2000-06-25
PRIOR FILING DATE: 2000-01-11
PRIOR FILING DATE: 1999-08-09
PRIOR FILING DATE: 1999-08-09
PRIOR FILING DATE: 1999-03-19
PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: 09/122,449
PRIOR FILING DATE: 1998-07-24
PRIOR FILING DATE: 1998-07-16
PRIOR FILING DATE: 1998-07-16
PRIOR FILING DATE: 1998-07-16
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APPLICANT: Mulero, Julio
APPLICANT: Yeung, George
TITLE OF INVENTION: METHODS AND MATERIALS RELATING
TITLE OF INVENTION: POLYPEPTIDES
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TITLE OF INVENTION: POLYPEPTIDES
FILE REFERENCE: 28110/36570
CURRENT APPLICATION NUMBER: US/09/608,285A
CURRENT FILING DATE: 2000-06-30
PRIOR APPLICATION NUMBER: 09/557,800
PRIOR FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/481,238
PRIOR FILING DATE: 2000-01-11
PRIOR APPLICATION NUMBER: 09/481,238
PRIOR FILING DATE: 1999-08-09
PRIOR FILING DATE: 1999-08-09
PRIOR PILING DATE: 1999-07-16
PRIOR PILING DATE: 1999-07-16
PRIOR FILING DATE: 1999-07-19
PRIOR FILING DATE: 1999-03-19
PRIOR FILING DATE: 2999-02-04
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Pred. No. C;
C; Mismatches
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Patent No. 6335013
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Best Local Similarity 100.0%; F
Matches 1287; Conservative 0;
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TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
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GENERAL INFORMATION:
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Sequence 4, Application US/093508368
Patent No. 6387645
GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS RETITLE OF INVENTION: POLYPEPTIDES
FILE REFERENCE: 28110/35761
CURRENT APPLICATION NUMBER: US/09/350,8368
CURRENT FILING DATE: 1999-07-09
PRIOR APPLICATION NUMBER: 09/118,205
PRIOR APPLICATION NUMBER: 09/122,449
PRIOR FILING DATE: 1998-07-16
PRIOR FILING DATE: 1998-07-24
PRIOR FILING DATE: 1998-07-24
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PRIOR FILING DATE: 1998-07-24
PRIOR FILING DATE: 2999-02-04
NUMBER OF SEQ ID NOS: 23
SOFTWARE: Patentin Ver. 2.0
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Best Local Similarity 100.0%; Pred. No. 0;
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Sequence 4, Application US/09370265

Patent No. 6447771

GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS
TITLE OF INVENTION: POLYPEPTIDES
CURRENT APPLICATION NUMBER: US/09/370,265
CURRENT FILING DATE: 1999-08-09
EARLIER FILING DATE: 1999-07-16
EARLIER FILING DATE: 1999-07-09
EARLIER FILING DATE: 1999-07-09
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US-09-557-800C-4
Sequence 4, Application US/09557800C
Patent No. 6476211
GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Ford, John
APPLICANT: Wuler, Julio
APPLICANT: Yeung, George
TITLE OF INVENTION: Methods and Materials Reli
TITLE OF INVENTION: Methods and Materials Reli
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 28110/36457
CURRENT APPLICATION NUMBER: 09/481,238
PRIOR FILING DATE: 2000-01-11
PRIOR FILING DATE: 1999-08-08
PRIOR FILING DATE: 1999-07-16
PRIOR FILING DATE: 1999-07-09
PRIOR FILING DATE: 1999-07-09
PRIOR FILING DATE: 1999-07-24
PRIOR FILING DATE: 1998-07-24
PRIOR FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 56
SOFTWARE: PATENTIN VOYE: 2.0
SEQ ID NO 4
FRIOR APPLICATION NUMBER: 09/118,205
PRIOR FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 56
SOFTWARE: PATENTIN VOYE: 2.0
SEQ ID NO 4
FRIOR APPLICATION NUMBER: 09/118,205
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NUMBER OF SEQ ID NOS: 37
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FILE REFERENCE: 28111/35908

CURRENT APPLICATION *NUMBER: US/09/370,265

CURRENT FILING DATE: 1999-08-09

EARLIER APPLICATION NUMBER: PCT/US99/16180

EARLIER FILING DATE: 1999-07-16

EARLIER FILING DATE: 1999-07-09

EARLIER FILING DATE: 1999-07-09

EARLIER FILING DATE: 1999-03-19

EARLIER FILING DATE: 1999-03-19

EARLIER APPLICATION NUMBER: 09/244,444

EARLIER FILING DATE: 1999-02-04

EARLIER FILING DATE: 1999-02-04

EARLIER FILING DATE: 1999-07-16

MUMBER OF SEQ ID NOS: 37

SOFTWARE: PATENTIN VEY: 2.0

SEQ ID NO 6

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TYPE: DNA
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Sequence 2, Application US/10091085
Fublication No. US20020146772A1
SENERAL INFORMATION:
APPLICANT: Ford, John
TITLE OF INVENTION: METHODS AND MATERIALS R
TITLE OF INVENTION: POLYPEPTIDES
FILE.REFERENCE: 28110/35761
CURRENT APPLICATION NUMBER: US/1C/091,085
CURRENT FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: 09/350,836
PRIOR FILING DATE: 1999-07-09 က္ခ

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PRIOR FILING DATE: 1998-07-24
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NUMBER OF SEQ ID NOS: 23
SOFTWARE: Patentin Ver. 2.0
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Sequence 2, Application US/10092063
Sequence 2, Application US/10092063
Publication No. US20020173005A1
GENERAL INFORMATION:
APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS REFILE REFERENCE: 28110/35908
CURRENT FILING DATE: 2002-03-05
PRIOR APPLICATION NUMBER: 09/370,265
PRIOR FILING DATE: 2002-01-31
PRIOR FILING DATE: 1999-07-16
PRIOR FILING DATE: 1999-07-16
PRIOR FILING DATE: 1999-07-16
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APPLICANT: Mulero, Julio
APPLICANT: Yeung, George
TITLE OF INVENTION: Methods and Materials Relating
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 28110/36457CON
CURRENT APPLICATION NUMBER: US/10/286,926
CURRENT FILING DATE: 2002-11-01
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PRIOR FILING DATE: 2000-04-25
PRIOR APPLICATION NUMBER: 09/481,238
PRIOR FILING DATE: 2000-61-11
PRIOR FILING DATE: 1999-08-05
PRIOR APPLICATION NUMBER: 09/370,265
PRIOR APPLICATION NUMBER: 09/370,265
PRIOR FILING DATE: 1999-07-16
PRIOR FILING DATE: 1999-07-09
PRIOR FILING DATE: 1999-03-19
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Publication No. US20030175752A1
GENERAL INFORMATION:
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Sequence 4, Application US/10286926
Publication No. US20030175752A1
GPUBLICANT:
APPLICANT:
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APPLICANT: Mulero, Julio
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APPLICANT: Mulero, Julio
APPLICANT: Yeung, George
TITLE OF INVENTION: Methods and Materials RITLE OF INVENTION: Polypeptides
TITLE OF INVENTION: Polypeptides
TITLE OF INVENTION: Polypeptides
FILE REFERENCE: 28110/36457CON
CURRENT APPLICATION NUMBER: 09/557,800
PRIOR APPLICATION NUMBER: 09/557,800
PRIOR FILING DATE: 2000-01-11
PRIOR FILING DATE: 1999-06-09
PRIOR APPLICATION NUMBER: 09/35036
PRIOR APPLICATION NUMBER: 09/23447
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PRIOR APPLICATION NUMBER: 09/21449
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US-10-092-063-4
US-10-092-063-4
Sequence 4, Application US/10092063
Publication No. US20020173005A1
GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS REFFILE OF INVENTION: METHODS AND MATERIALS REFFILE OF INVENTION: METHODS AND MATERIALS REFFILE OF INVENTION NUMBER: US/10/092,063
CURRENT FILING DATE: 2002-03-05
FRIOR APPLICATION NUMBER: 09/370,265
FRIOR FILING DATE: 1999-07-16
PRICR FILING DATE: 1999-07-09
FRICR FILING DATE: 1999-03-19
PRICR FILING DATE: 1999-03-19
PRICR FILING DATE: 1999-03-19
PRICR FILING DATE: 1999-02-04
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Pred. No. C;
O; Mismatches
                                   APPLICANT: Mulero, Julio

APPLICANT: Mulero, Julio

TITLE OF INVENTION: METHODS AND MATERIALS RE

TITLE OF INVENTION: POLYPEPTIDES

FILE REFERENCE: 28110/35761

CURRENT APPLICATION NUMBER: US/10/091,085

CURRENT APPLICATION NUMBER: 09/350,836

PRIOR APPLICATION NUMBER: 09/350,836

PRIOR FILING DATE: 1999-07-09

PRIOR FILING DATE: 1999-07-16

PRIOR FILING DATE: 1998-07-16

PRIOR FILING DATE: 1998-07-24

PRIOR FILING DATE: 1998-07-24

PRIOR FILING DATE: 1999-02-04

NUMBER OF SEQ ID NOS: 23

SOFTWARE: PATENTIN VEY: 2.0
Sequence 4, Application US/1009108: Publication No. US20020146772A1 GENERAL INFORMATION: APPLICANT: Ford, John Applicant: Wilder Inito
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Best Local Similarity 100.0%;
Matches 1287; Conservative (
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LOCATION: (1)
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                                               Sequence 6, Application US/10286926

APPLICANT: Pord, John
APPLICANT: Pord, John
APPLICANT: Wilero, Julio
APPLICANTON: Polypeptides
FILE OF INVENTION: Polypeptides
FILE OF INVENTION: Polypeptides
FILE OF INVENTION: Polypeptides
FILE SFERENCE: 2010/364570N
CURRENC APPLICATION NUMBER: US/420

PRIOR FILING DATE: 2000-01-11

PRIOR FILING DATE: 1999-08-09

PRIOR APPLICATION NUMBER: OS/350836

PRIOR APPLICATION NUMBER: OS/320816

PRIOR APPLICATION NUMBER: OS/24444

PRIOR APPLICATION NUMBER: OS/24444

PRIOR APPLICATION NUMBER: OS/24444

PRIOR APPLICATION NUMBER: OS/24444

PRIOR PILING DATE: 1999-02-04

PRIOR APPLICATION NUMBER: OS/24444

PRIOR PILING DATE: 1999-02-04

PRIOR PILING DATE: 1999-02-04

PRIOR PILING DATE: 1999-02-04

PRIOR PILING DATE: 1999-07-16

NUMBER OF SEQ ID NOS: 54

SOFTWARE: PATENTING DATE: 1998-07-16

NUMBER OF SEQ ID NOS: 54
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ORGANISM: Homo &
FEATURE:
NAME/KEY: CDS
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Pred. No. 0;
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PRIOR FILING DATE: 1998-07-24
PRIOR APPLICATION NUMBER: 09/118,
PRIOR FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 39
SCFTWARE: Patentin Ver. 2.0
SEQ ID NO 4
LENGTH: 1287
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(1284)
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Sequence 6, Application US/10091085
Bublication No. US20020146772A1
SENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Mulero, Julio
APPLICANTON: POLYPEPTIDES
CURRENT APPLICATION NUMBER: US/10/091,085
CURRENT FILING DATE: 1999-07-09
PRIOR FILING DATE: 1999-07-16
PRIOR FILING DATE: 1998-07-24
PRIOR FILING DATE: 1998-07-24
PRIOR FILING DATE: 1999-02-04
NUMBER OF SEQ ID NOS: 23
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 6
LENGTH: 1287
TYPE: DNA
ORGANISM: Homo Bapiens
FEATURE:

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Pred. No. 0;
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Best Local Similarity 99.5%;
Matches 1281; Conservative
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                RESULT 11
US-10-092-063-6
Sequence 6, Application US/10092063
Publication No. US20020173005A1
GENERAL INFORMATION:
APPLICANT: Ford, John
APPLICANT: Mulero, Julio
TITLE OF INVENTION: METHODS AND MATERIALS REFILE REFERENCE: 28110/3598
CURRENT APPLICATION NUMBER: US/10/092,063
CURRENT FILING DATE: 2002-01-31
PRIOR APPLICATION NUMBER: 09/370,265
PRIOR FILING DATE: 1999-07-16
PRIOR FILING DATE: 1999-07-16
PRIOR FILING DATE: 1999-07-09
PRIOR FILING DATE: 1999-07-09
PRIOR FILING DATE: 1999-07-09
PRIOR FILING DATE: 1999-02-04
PRIOR FILING DATE: 1999-02-04
PRIOR FILING DATE: 1999-02-04
PRIOR FILING DATE: 1998-07-24
PRIOR FILING DATE: 1998-07-26
PRIOR FILING DATE: 1998-07-26
PRIOR FILING DATE: 1998-07-16
NUMBER OF SEQ ID NOS: 39
SOFTWARE: PATENTIN VEY: 2.0
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TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(1284).
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SOFTWARE: Patentin Ver. SEQ ID NO 103
SEQ ID NO 103
LENGTH: 1457
TYPE: DNA
CRGANISM: Homo sapiens
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Patent No. US20020055627A1
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Protei
FILE REFERENCE: PA102
CURRENT APPLICATION NUMBER: US/09/925,299
CURRENT FILING DATE: 2001-08-10
PRIOR APPLICATION NUMBER: PCT/US00/05883
PRIOR FILING DATE: 2000-03-08
PRIOR FILING DATE: 1999-03-12
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US-10-198-846-12729
Sequence 12729, Application US/10198846
Bublication No. US2003009974A1
GENERAL INFORMATION:
APPLICANT: LINFORMATION:
APPLICANT: Ku, Yongyao
APPLICANT: Wang, Youzhen
APPLICANT: Steinmann, Kathleen
TITLE OF INVENTION: FOR IDENTIFICATION, ASSESSMENT, FRE
TITLE OF INVENTION: THERAPY OF BREAST CANCER
TITLE OF INVENTION: THERAPY OF BREAST CANCER
TITLE OF INVENTION: THERAPY OF BREAST CANCER
TITLE OF INVENTION UMBER: US/10/198,846
CURRENT APPLICATION NUMBER: 00/306,220
PRIOR APPLICATION NUMBER: 60/306,220
PRIOR FILING DATE: 2001-07-18
SOFTWARE: FASESEQ for Windows Version 4.0
SEQ ID NO 12729
LENGTH: 978
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: misc_feature
LOCATION: 683, 689, 978
OTHER INFORMATION: n = A,T,C or G
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S-09-925-299-103
Sequence 103, Application US/C9925299
Publication No. US2030040617A9
GENERAL INFORMATION:
APPLICANT: Rosen et al.
TITLE OF INVENTION: Nucleic Acids, Proteins
FILE REFERENCE: PA102
CURRENT APPLICATION NUMBER: US/C9/925,299
CURRENT FILING DATE: 20C1-08-10
PRIOR APPLICATION NUMBER: FCT/US00/05883
PRIOR FILING DATE: 20C0-03-08
PRIOR FILING DATE: 1999-03-12
NUMBER OF SEQ ID NOS: 1556
SOFTWARE: Patentin Ver. 2.C
SEQ ID NO 103
LENGTH: 1457
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Matches 1085; Conservative
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09-925-299-103
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Sequence 11752, Application US/09960352
Sequence 11752, Application US/09960352
Patent No. US20020137139A1
GENERAL INFORMATION:
APPLICANT: Warren, Wesley C.
APPLICANT: Tao, Nengbing
APPLICANT: Byatt, John C.
APPLICANT: Mathialagan, Nagappan
TITLE OF INVENTION: NUCLEIC ACID AND OTHER MOLECULES A:
TITLE OF INVENTION: MJSCLE AND FAT DEPOSITION
FILE REFERENCE: 16511.006/37-21(10298)C
CURRENT APPLICATION NUMBER: US/09/960,352
CURRENT FILING DATE: 2001-09-24
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           Score 476; DB 14;
Pred. No. 1.1e-142;
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Pred. No. 4e-105;
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Matches 382; Conservative
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NUMBER OF SEQ ID NOS: 15
SEQ ID NO 11752
LENGTH: 420
TYPE: DNA
ORGANISM: BOS taurus
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CB132877 K-EST0183

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CB156899 K-EST0215

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REFERENCE AUTHORS

CDNA

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Pred. No. 1.3e-223;
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     Please visit our web site ______URL:http://genome.gsc.riken.go.jp/URL:http://fantom.gsc.riken.go.jp/URL:http://fantom.gsc.riken.go.jp/Iocation/Qualifiers 1.3698
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Shibata, K., Itoh, M., Aizawa, K., Nagaoka, S., Sasaki, N., Carninci, P., Konno, H., Akiyama, J., Nishi, K., Kitsunai, T., Tashiro, H., Itoh, M., Sumi, N., Ishii, Y., Nakamura, S., Hazama, M., Nishine, T., Harada, A., Yamamoto, R., Matsumoto, H., Sakaguchi, S., Ikegami, T., Kashiwagi, K., Fujiwake, S., Inoue, K., Togawa, Y., Izawa, M., Chara, E., Watahiki, M., Yoneda, Y., Ishikawa, T., Ozawa, K., Tanaka, T., Matsuura, S., Kawai, J., Okazaki, Y., Muramatsu, M., Inoue, Y., Kira, A. and Hayashizaki, Y., RIKEN integrated sequence analysis (RISA) system--384-format sequencing pipeline with 384 multicapillary sequencer

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Analysis of the rouse transcriptome based on functional annotation of 60,770 full-length cDNAs

L Nature 420, 563-573 (2002)

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8 Adachi, J., Aizawa, K., Akimura, T., Hara, A., Hashizume, N., Haragaki, T., Hara, A., Hashizume, N., Haragaki, T., Hara, A., Hashizume, N., Hayashida, K., Hayashida, K., Hayashida, K., Hayashida, K., Hayashida, K., Hayashida, K., Mayazaki, T., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Itoh, M., Kagawa, T., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Nomdo, S., Konno, H., Kasukawa, T., Nomdo, M., Ohsato, M., Nishi, K., Nomura, K., Nimagawa, R., Ohno, M., Ohsato, N., Okazaki, Y., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Saitoh, M., Sakai, C., Sakai, K., Sakazume, N., Saitoh, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takeda, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Direct Submission

Submitted (16-APR-2002) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute: 1-7-22 Suchiro-Cho, Tsurumi-ku, Yokohama, Kanagawa 23C-0455, Japan (E-mail:genome-reséggsc.riken.go.jp,, Pax:B1-45-501-9212, Pax:B1-45-501
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Tissues were provided by Dr. John Todd (Dept. of Medical G
Wellcome Trust Centre for Molecular Mechanisms in Disease
Trust/MRC building Addenbrookes Hospital Cambridge) whose
assistance we gratefully acknowledge.
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CDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group, Tauranis and Genome Science Jaboratory in Riken Division of Experimental Animal Research in Riken contributed to prepare mouse tissues.

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Group Phase I'& II Team.
Analysis of the mouse transcriptome based on functional annotation of 60,710 full-length cDNAs
Analysis of the mouse transcriptome based on functional annotation of 60,710 full-length cDNAs
Nature 420, 563-573 (2002)
E (bases 1 to 4091)
B Adachi, J. Alzawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Rudda, S., Furuno, M., Hiramoto, K., Hiraoka, T., Harozane, T., Hayashida, K., Hayatsu, N., Hiramoto, K., Hiraoka, T., Hirozane, T., Katoh, H., Kawai, J., Kojian, Y., Kojian, Y., Koddo, S., Kurihara, C., Matsuyama, T., Miyazaki, P., Ohno, M., Ohsato, N., Naxaki, D., Salto, M., Sato, M., Ohno, M., Ohsato, N., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sogabe, Y., Tadaka, T., Tomara, K., Shinagawa, A., Shiraki, T., Shada, Y., Tadaka, T., Tomara, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y. Takahashi, Y., Muramatsu, M. and Hayashizaki, Y. Takahashi, S., Muramatsu, M. and Hayashizaki, Y. Takahashi, Y., Shinagawa, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y. Takahashi, Y., Shinagawa, A., Toya, T., Yasunishi, A., Yokohama, Subirted (16-JUL-2001) Yoshhide Hayashizaki, Thre Institute of Physical and Chemical Research Group, RIKEN Genome Sciences Center (GSC), Fax:Blassy was prepared and sequenced in Kouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Collister and Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in Riken Genome Lissues.

Please visit to ur web site for further details.

Please visit to ur web site for further details.
caldarelli,R., Barsh,G., Blake,J., Boffelli,D., Bojunga,N.,
Carninci,P., de Bonaldo,M.F., Brownstein,M.J., Bult,C.,
Fletcher,C., Fujita,M., Gariboldi,M., Gustincich,S., Hill,D.,
Hofmann,M., Hume,D.A., Kamiya,M., Lee,N.H., Lyons,P.,
Marchionni,L., Mashima,J., Mazzarelli,J., Mcmbaerts,P., Nordone,P.,
Ring,B., Ringwald,M., Rodriguez,I., Sakamoto,N., Sasaki,H.,
Sato,K., Schonbach,C., Seya,T., Shibata,Y., Storch,K.F., Suzuki,H.,
Toyo-oka,K., Wang,K.H., Weitz,C., Whittaker,C., Wilming,L.,
Wynshaw-Boris,A., Yoshida,K., Hasegawa,Y., Kawaji,H., Kohtsuki,S.
and Hayashizaki,Y.
Functional annotation of a full-length mouse cDNA collection
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Arakawa, T., Hara, A., Fukunishi, Y., Konno, H., Adachi, J., Fukuda, S.,
Aizawa, K., Izawa, M., Nishi, K., Kiyosawa, H., Kondo, S., Yamanaka, I.,
Saito, T., Okazaki, Y., Gojobori, T., Bono, H., Kasukawa, T., Saito, R.,
Kadota, K., Matsuda, H., Ashburner, M., Batalov, S., Casavant, T.,
Fleischmann, W., Gaasterland, T., Gissi, C., King, B., Kochiwa, H.,
Kuehl, P., Lewis, S., Matsuo, Y., Nikaido, I., Pesole, G.,
Quackenbush, J., Schriml, L.M., Staubli, F., Suzuki, R., Tomita, M.,
Wagner, L., Washio, T., Sakai, K., Okido, T., Furuno, M., Aono, H.,
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library, clone:9830144N04 product:ectonucleoside triphosphat
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Mus musculus 13 days embryo male testis cDNA, RIKEN full-length enriched library, clone:6030456F04 product:ectonucleoside triphosphate diphosphohydrolase 5, full insert sequence.

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Mus musculus (house mouse)

Mus musculus (house mouse)

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus High-efficiency full-length cDNA cloning

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/db_xref="taxon:10090"
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Analysis of the mouse transcriptome based on functional annotation of 6.770 full-length CDNAs

Nature 420, 563-573 (2002)
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8 Adachi, J. Alzawa, K. Akimura, T. Hara, A., Hashizume, W., Haramoto, K., Hiraoka, T., Hirozane, T., Hayashida, K., Iayasta, M., Haramoto, K., Hiraoka, T., Hirozane, T., Hayashida, K., Iayasta, M., Haramoto, K., Hiraoka, T., Hirozane, T., Hori, F., Imotani, K., Ishii, Y., Itoh, M., Kagawa, I., Ksukawa, T., Kataka, M., Kataka, M., Kataka, M., Nouda, M., Nollina, Y., Salto, S., Komon, M., Kouda, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Salto, S., Saltoh, H., Sasaki, D., Shibata, K., Shinagawa, A., Sakai, K., Sakazume, M., Takaku-Akahira, S., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Tomaru, A., Toya, T., Yasunishi, A., Takaku-Akahira, S., Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research Group, R.KEN Genome Center (GSC), RIKEN Yokohama Institute, 1-7-22 Subhiro-cho, Tsurumi-ku, Yokohama, URL: http://genome.gsc.riken.go.jp/, Tel:81-45-503-922, Fax:81-45-503-9216)

CDNA library was prepared and sequenced in Mouse Genome Engerence Center and Genome Science Laboratory in Riken Convision of Experimental Animal Research in Riken contributed to preper most elisates.
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Sogabe, Y., Tanaka, T., Tomanu, A., Toya, T., Yasunishi, A., Muzamarsu, M., and Hayashizaki, Y.

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Encyclopedia Project of Genome Exploration Research Genome Exploration Sciences Center and Genome Exploration Prode (Jopt. of Medical Genotics Tissues were provided by Dr. John Todd (Jopt. of Medical Genotics Tissues were provided by Dr. John Todd (Jopt. of Medical Genotics Turst-/MRC building Addenbrookes Hospital Cambridge) whose assistance we gratefully acknowledge. Pleases visit our web site for further details.

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8 Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, F., Fukuda, S., Furuno, M., Hanagaki, T., Haraoka, T., Hashizume, W., Hayashida, K., Furuno, M., Haraoka, T., Hashizume, T., Hayashida, K., Ishii, Y., Itoh, W., Kagawa, I., Kasukawa, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saito, R., Saitoh, H., Sakai, K., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Shibata, K., Shinagawa, A., Shiraki, T., Sasaki, T., Tomaru, A., Toya, T., Yasunishi, T., Sogabe, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Direct Submission

Direct Submission

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Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
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triphosphate diphosphohydrolase
GB|NM_007647, evidence: BLASTN,
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db_xref="taxon:10090"
clone="9530068A17"
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/clone_lib="RIKEN full-length &
/dev_stage="adult"
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URL:http://fantom.gsc.riken.go.jp/
Location/Qualifiers
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/mol_type="mRNA"
/strain="C57BL/6J"
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Mus musculus adult male urinary bladder cDNA, RIKEN full-lesentiched library, clone:9530068Ai7 product:ectonucleoside triphosphate diphosphohydrolase 5, full insert sequence.

AK079267.1 GI:26347886

HTC; CAP trapper.
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Murinae, Mu
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Mus musculus 16 days neonate thymus cDNA, RIKEN full-length enriched library, clone:Al30044A06 product:ectonucleoside triphosphate diphosphohydrolase 5, full insert sequence. AKO37736

AKO37736.1 GI:26332261

HTC; CAP trapper.

Mus musculus (house mouse)

Mus musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleos
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Tashiro, H.
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GSVSIMDGSYEGILAWVTVNFLTGQLHGRGQETVGTLDLGGASTQITFLPQFEKTLEQ
TPRGYLTSFEMFNSTFKLYTHSYLGGLKAARLATLGALEAKGTDGHTFRSACLPRWL
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Functional annotation of a full-length mouse cDNA collection Nature 409 (6021), 685-690 (2001)
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Analysis of the mouse transcriptome based on functional annotation of 66,770 full-length cDNAs

I Nature 420, 563-573 (2002)

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8 Adachi, J., Aizawa, K., Akimura, T., Arakawa, T., Bono, H., Carninci, P., Fukuda, S., Furuno, M., Hanagaki, T., Hara, A., Hashizume, K., Hayarsu, N., Hanagaki, T., Hara, A., Hashizume, K., Galma, K., Hiraoka, T., Hirozane, T., Katoh, H., Kawai, J., Kojima, Y., Kondo, S., Konno, H., Kouda, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Nakamura, M., Nishi, K., Nomura, K., Numazaki, R., Ohno, M., Ohsato, N., Okazaki, Y., Saitoh, H., Sakai, C., Sakai, K., Sakazume, N., Salatoh, H., Sakai, C., Sakai, K., Sakazume, N., Sano, H., Sasaki, D., Saitoh, H., Sakai, C., Sakai, K., Tanaka, T., Tomaru, A., Takahashi, F., Takaku-Akahira, S., Takada, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Muramatsu, M. and Hayashizaki, Y., Saitoh, M., Tagawa, A., Takahashi, F., Takaku-Akahira, S., Takada, Y., Tanaka, T., Tomaru, A., Toya, T., Yasunishi, A., Direct Submission

Submitted (16-JUL-2001) Yoshihide Hayashizaki, The Institute of Physical and Chemical Research (RIKEN), Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center (GSC), RIKEN Yokohama Institute; 1-7-22 Suehiro-Cho, Tsurumi-ku, Yokohama, Kanagawa 236-0045, Japan (E-mail:Genome-reseages:riken.go.jp/, RL:http://genome.gsc.riken.go.jp/, Tel:81-45-503-922, Dana (E-mail:Genome-reseages:riken.go.jp/, Tel:81-45-503-922, Dana (E-mail:Genome-reseages:riken.go.jp/, Tel:81-45-503-922, Dana (E-mail:Genome-gsc.riken.go.jp/, Tel:81-45-503-922, Dana (E-mail:Genome-gs
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            Carninci, P., Shibata, Y., Hayatsu, N., Sugahara, Y., Shibata, K., Itoh, M., Konno, H., Okazaki, Y., Muramatsu, M., and Hayashizaki, Y., Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genome Res. 10 (10), 1617-1630 (2000)
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Mus musculus adult male kidney CDNA, RIKEN fuli-length enriched library, clone:0610012N06 product:ectonucleoside triphosphate diphosphohydrolase 5, full insert sequence.

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               TTAACAGCACTTATAAG
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Analysis of the mouse transcriptome based of 60,770 full-length cDNAs
Nature 420, 563-573 (2002)
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Please visit our web site for further details.

URL:http://fantom.gsc.riken.go.jp/
URL:http://fantom.gsc.riken.go.jp/.
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/dev_stage="adult"
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/note="unnamed protein product; ectonuc
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/sex="male"
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              Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostc

Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

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S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov/

Tissue Procurement: Life Technologies, Inc.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Gensortium (LINL)

DNA Sequencing by: Agencourt Bioscience Corporation

clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LINL at:

http://image.llnl.gov

Plate: LLAMI2809 row: k column: 02

High quality sequence start: 6

High quality sequence stop: 676.
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/organism="Homo sapiens"
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/tissue_type="cervical carcinoma cell line"
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/clone lib="NIH MGC 12"
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Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

I (bases 1 to 842)

National Institutes of Health, Mammalian Gene Collection (M

Unpublished

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: ATC

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can

found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

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High quality sequence stop: 833.
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Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM11468 row: o column: 16
High quality sequence start: 4
High quality sequence stop: 749.
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pCMV-SPORT6; Site_1: NotI; Site_2: EcoRV (destroyed);
source anonymous pool of 3 colons, age 26 yo male, 49
female, 71 yo male colon; 46 yo male kidney, and pool
stomachs, 62 yo male and 70 yo female. Library is
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Mammalia; Eutheria; Primates; Catarrhin; Hominidae;
1 (bases 1 to 749)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collect
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603197495F1 NIH_MGC_95 Homo sapiens CDNA clone IMAGE:5277119 5', mRNA sequence.
BI551795

BI551795

BI551795.1 GI:15439107

EST.
Homo sapiens (human)
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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destroyed upon cloning). Average insert size 1.4 kb, insert size range 1-3 kb. Library is normalized and enriched for full-length clones and was constructed by Gruber (Invitrogen). Research Genetics tracking code 023. Note: this is a NIH MGC Library."
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                            Contact: Rober: Strausberg, Ph.D.

Contact: Rober: Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Miklos Palkovits, M.D., Ph.D.

CDNA Library Preparation: Michael J. Brownstein (NHGRI), S

Toshiyuki and Piero Carninci (RIKEN)

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LINL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAMil699 row: m column: 24

High quality sequence stop: 777.
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NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
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Homo sapiens (human)

SM Homo sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom;

Eukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

E 1 (bases 1 to 878)

S NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Longublished

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-r@mail.nih.gov

Tissue Procurement: Miklos Palkovits, X.D., Ph.D.

CDNA Library Preparation: Michael J. Brownstein (NHGRI), Shiraki

Toshiyuki and Piero Carninci (RIKEN)

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

Location/Qualifiers

Location/Qualifiers

Location/Qualifiers
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602684782F1 NIH_MGC_95 Homo sapiens cDNA clone IMAGE:4817229 5'mRNA sequence.
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BG702864.1 GI:13974632
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Wammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murina bases 1 to 881)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (Musicional Institutes of Health, Mammalian Gene Collection (Musicional Institutes of Health, Mammalian Gene Collection (Musicional: cgapbs-r@mail.nih.gov

Tissue Procurement: Jeffrey E. Green, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10957 row: m column: 15
High quality sequence stop: 874.
Location/Qualifiers
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0; Mismatches 106;
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linear EST 12 cDNA clone IMAGE:4

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LOCUS

BG969449
602837163F1 NCI_CGAP_Kid14 Mus mus
5', mRNA sequence.
BG969449
BG969449.1 GI:14357086
EST.
Mus musculus (house mouse)
Mus musculus
Eukaryota; Metazoa; Chordata; Cras

SM

ACCESSION VERSION KEYWORDS SOURCE ORGANISM

ostomi

Eutele

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Vertebrata

Craniata;

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